

What is claimed is:

1. A method of reducing skin irritation associated with shaving, the method comprising applying to skin a composition comprising:

a) a lower alcohol and water in a weight ratio of about 20:80 to 100:0, and

b) about 0.5% to about 8% by weight of a thickener system, based on the total weight of the composition, wherein the thickener system comprises at least about 0.05% by weight of at least one emulsifier, based on the total weight of the composition, wherein the emulsifier comprises:

(i) at least one hydrophobic group selected from the group consisting of:

A. an alkyl group of at least 16 carbon atoms;

B. an alkenyl group of at least 16 carbon atoms; and

C. an aralkyl or an aralkenyl group of at least 20 carbon atoms; and

(ii) at least one hydrophilic group selected from the group consisting of:

A. an ethylene oxide- and/or propylene oxide-containing group bonded to the hydrophobic group through an ether or ester bond and optionally terminated with a (C1-C36)alkyl ester, (C2-C36)alkenyl ester, or (C6-C36)alkaryl ester;

B. an alcohol group;

C. a polyhydric alcohol group;

D. an ester or ether group of a polyhydric alcohol or polyalkoxylated derivative thereof having 2-150 moles of alkylene oxide per mole of hydrophobic group;

E. an ester or ether group of sorbitan or polyalkoxylated derivative thereof; and

F. combinations of these groups;

wherein the composition has a viscosity of at least about 4,000 centipoise at 23°C when in the absence of an auxiliary thickener, as measured using a very low shear viscometer and T spindles with a heliopath adapter.

- 5 2. The method of claim 1 wherein the hydrophobic group is selected from the group consisting of: an alkyl group of at least 24 carbon atoms; an alkenyl group of at least 24 carbon atoms; and an aralkyl or an aralkenyl group of at least 24 carbon atoms.
- 10 3. The method of claim 1 wherein the composition has a melt temperature of greater than about 25°C when in the absence of an auxiliary thickener.
4. The method of claim 1 wherein the composition does not separate more than about 10% by volume when centrifuged for 20 minutes at 2275 x g.
- 15 5. The method of claim 1 wherein the thickener system has a weight average hydrophile/lipophile balance of about 8 to about 12.
6. The method of claim 1 wherein the lower alcohol to water weight ratio is about 60:40 to about 75:25.
- 20 7. The method of claim 1 wherein the composition further comprises at least one emollient distinct from the thickener system.
8. The method of claim 1 wherein the composition further comprises a salt.
9. The method of claim 1 wherein the composition further comprises a stabilizer.
- 30 10. The method of claim 1 wherein the composition further comprises a polymeric thickening agent.

NE 11

The method of claim 1 wherein the thickener system comprises at least one of the following:

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- a) a polyethoxylated alcohol and an alkyl alcohol;
  - b) a polyethoxylated alkyl alcohol;
  - c) a polyhydric alcohol ester and polyethoxylated alcohol;
  - d) an alkyl ester of sorbitan and a polyethoxylated alcohol;
  - e) an alkyl alcohol and an alkyl ester of a polyethoxylated alcohol;
  - f) a polyethoxylated alkyl alcohol and an alkyl ester of a polyethoxylated
  - 10 alcohol;
  - g) an alkyl alcohol, a polyethoxylated alkyl alcohol, and a dimethicone copolyol alkyl phosphate; or
  - h) a polyglycerol ester, a polyethoxylated alcohol, and an alkyl alcohol.

NE 12

The method of claim 11 wherein the thickener system further comprises an emulsifier with at least two hydrophobic components.

NE 13

The method of claim 12 wherein the emulsifier with at least two hydrophobic components is a quaternary ammonium salt.

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NE 14

The method of claim 1 wherein the ethylene oxide- and/or propylene oxide-group is a polyethylene glycol group, a polypropylene glycol group, or a polyethylene glycol/polypropylene glycol copolymeric group.

- 25 15. The method of claim 1 wherein the emulsifier is selected from the group consisting of a poly(ethoxylated and/or propoxylated) alcohol, a poly(ethoxylated and/or propoxylated)ester, a derivative of a poly(ethoxylated and/or propoxylated) alcohol, a derivative of a poly(ethoxylated and/or propoxylated)ester, an alkyl alcohol, an alkenyl alcohol, an ester of a polyalkoxylated derivative of a polyhydric
- 30 alcohol, an ether of a polyalkoxylated derivative of a polyhydric alcohol, a sorbitan

support in spec. for deriv.

fatty acid ester, a polyalkoxylated derivative of a sorbitan fatty acid ester, and mixtures thereof.

16. The method of claim 1 wherein the composition further comprises a  
5 fragrance.

17. The method of claim 16 wherein the fragrance is a perfume.

18. The method of claim 1 wherein the composition is pearlescent.  
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19. The method of claim 1 wherein the composition is an aftershave.

20. A method of reducing skin irritation associated with shaving, the method comprising applying to skin a composition comprising:  
15 a) a lower alcohol and water in a weight ratio of about 20:80 to 100:0, and  
b) about 0.5% to about 8% by weight of a thickener system, based on the total weight of the composition, wherein the thickener system comprises at least about 0.05% by weight of at least one emulsifier, based on the total weight of the composition, wherein the emulsifier comprises:

20 (i) at least one hydrophobic group selected from the group consisting of:

A. an alkyl group of at least 24 carbon atoms;

B. an alkenyl group of at least 24 carbon atoms; and

25 C. an aralkyl or an aralkenyl group of at least 24 carbon atoms; and

(ii) at least one hydrophilic group selected from the group consisting of:

30 A. an ethylene oxide- and/or propylene oxide-containing group bonded to the hydrophobic group through an ether or ester bond and optionally terminated with a (C1-

C36)alkyl ester, (C2-C36)alkenyl ester, or (C6-C36)alkaryl ester;

B. an alcohol group;

C. a polyhydric alcohol group;

5 D. an ester or ether group of a polyhydric alcohol or polyalkoxylated derivative thereof having 2-150 moles of alkylene oxide per mole of hydrophobic group;

E. an ester or ether group of sorbitan or polyalkoxylated derivative thereof; and

10 F. combinations of these groups;

wherein the composition has a melt temperature of greater than about 25°C and a viscosity of at least about 4,000 centipoise at 23°C when in the absence of an auxiliary thickener, as measured using a very low shear viscometer and T spindles with a heliopath adapter.

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21. The method of claim 20 wherein the composition further comprises a fragrance.

22. The method of claim 21 wherein the fragrance is a perfume.

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23. The method of claim 20 wherein the composition is pearlescent.

24. The method of claim 20 wherein the composition is an aftershave.

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25. A method of reducing skin irritation associated with shaving, the method comprising applying to skin a composition comprising:

a) a major amount of a solvent comprising a lower alcohol and water in a weight ratio of about 60:40 to 95:5, and

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b) about 0.5% to about 8% by weight of a thickener system, based on the total weight of the composition, wherein the thickener system comprises at least about 0.05% by weight of one or more emulsifiers, based on the total

weight of the composition, wherein at least one of the emulsifiers is solid at room temperature;

wherein the composition has a melt temperature of greater than about 25°C and a viscosity of at least about 45,000 centipoise after 19 days at 23°C when in the absence of an auxiliary thickener, as measured using a very low shear viscometer and T spindles with a heliopath adapter.

26. The method of claim 25 wherein the composition further comprises a fragrance.

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27. The method of claim 26 wherein the fragrance is a perfume.

28. The method of claim 25 wherein the composition is in the form of a lotion, a gel, or a foam.

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29. The method of claim 25 wherein the composition comprises both wax and liquid emollients in a weight ratio of 5:1 to 1:5 wax to liquid emollients.

30. The method of claim 29 wherein the weight ratio of wax to liquid emollients is within the range 3:1 to 1:3.

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31. The method of claim 25 wherein the composition is an aftershave.

32. A method of reducing skin irritation associated with shaving, the method comprising applying to skin a composition comprising:

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a) a lower alcohol and water in a weight ratio of about 20:80 to 100:0, and

b) about 0.5% to about 8% by weight of a thickener system, based on the total weight of the composition, wherein the thickener system comprises at

least about 0.05% by weight of at least two emulsifiers, based on the total

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weight of the composition, wherein at least one emulsifier comprises:

(i) at least one hydrophobic group selected from the group consisting of:

- A. an alkyl group of at least 16 carbon atoms;
- B. an alkenyl group of at least 16 carbon atoms; and
- C. an aralkyl or an aralkenyl group of at least 20 carbon atoms; and

(ii) at least one hydrophilic group selected from the group consisting of:

- A. an ethylene oxide- and/or propylene oxide-containing group bonded to the hydrophobic group through an ether or ester bond and optionally terminated with a (C1-C36)alkyl ester, (C2-C36)alkenyl ester, or (C6-C36)alkaryl ester;
- B. an alcohol group;
- C. a polyhydric alcohol group;
- D. an ester or ether group of a polyhydric alcohol or polyalkoxylated derivative thereof having 2-150 moles of alkylene oxide per mole of hydrophobic group;
- E. an ester or ether group of sorbitan or polyalkoxylated derivative thereof; and
- F. combinations of these groups;

and wherein at least one emulsifier comprises:

(i) at least one hydrophobic group selected from the group consisting of:

- A. an alkyl group of at least 16 carbon atoms;
- B. an alkenyl group of at least 16 carbon atoms; and
- C. an aralkyl or an aralkenyl group of at least 20 carbon atoms; and

(ii) at least one hydrophilic group selected from the group consisting of:

- A. an amide group;

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- B. a short chain ester of a long chain alcohol or acid;
  - C. a polyglucoside group having 1-10 glucose units;
  - D. a polyglycerol ester group having 1-15 glycerol units;
  - E. a secondary amine group;
  - F. a tertiary amine group;
  - G. a anionic group;
  - H. a zwitterionic group; and
  - I. combinations of these groups.
- 10 33. A method of reducing skin irritation associated with shaving, the method comprising applying to skin a composition comprising:
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- a) a lower alcohol and water in a weight ratio of about 20:80 to 95:5; and
  - b) about 0.5% to about 8% by weight of a thickener system, based on the total weight of the composition, wherein the thickener system comprises at least about 0.05% by weight of at least one emulsifier, based on the total weight of the composition, wherein the emulsifier comprises:
- 20
- (i) at least one hydrophobic group selected from the group consisting of:
    - A. an alkyl group of at least 16 carbon atoms;
    - B. an alkenyl group of at least 16 carbon atoms; and
    - C. an aralkyl or an aralkenyl group of at least 20 carbon atoms; and
  - (ii) at least one hydrophilic group selected from the group consisting of:
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- A. an amide group;
  - B. a short chain ester of a long chain alcohol or acid;
  - C. a polyglucoside group having 1-10 glucose units;
  - D. a polyglycerol ester group having 1-15 glycerol units;
  - E. a secondary amine group;
  - 30 F. a tertiary amine group;
  - G. a anionic group;



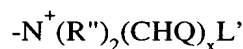
H. a zwitterionic group; and

I. combinations of these groups;

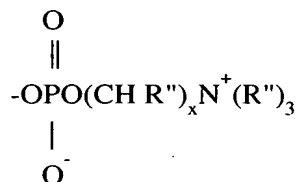
wherein the composition has a viscosity of at least about 4,000 centipoise at 23°C when in the absence of an auxiliary thickener, as measured using a very low shear viscometer and T spindles with a heliopath adapter.

34.

The method of claim 33 wherein the zwitterionic group has the formula:



or



wherein:

each R'' is independently hydrogen, an alkyl group, an alkenyl group, an alkyl carboxyl group, or an alkenyl carboxyl group, which alkyl or alkenyl groups are optionally substituted with nitrogen, oxygen, or sulfur atoms;

Q is hydrogen or hydroxyl;

x is 1 to 4; and

L' is  $-CO_2^-$ ,  $-OP(O)(O^-)(O^+M^+)$ ,  $-(O)P(OR''')(O)(O^+M^+)$ ,  $-SO_2O^+M^+$  or  $-OSO_2O^+M^+$  wherein:

R''' is hydrogen or an alkyl group of 1-10 carbon atoms optionally substituted with N, O, or S atoms;

M<sup>+</sup> is a positively charged counterion present in a molar ratio necessary to achieve a net neutral charge on the emulsifier and is selected from the group consisting of hydrogen, sodium, potassium, lithium, ammonium, calcium, magnesium,  $N^+R''_4$ , and combinations of these groups.

35. The method of claim 33 wherein the thickener system has a weight average hydrophile/lipophile balance of between about 8 and 12.

36. The method of claim 33 wherein the thickener system comprises at least one of the following:

- a) a short chain ester of a long chain alcohol or acid, an alkyl or alkenyl alcohol, and a quaternary amine;
- b) an alkylpolyglucoside, a polyethoxylated alcohol, and a quaternary amine;
- c) an alkylpolyglucoside, a polyethoxylated alcohol, and an amine oxide;
- d) an alkylpolyglucoside and a tertiary amine;
- e) an alkylpolyglucoside and a quaternary amine;
- f) a polyglycerol ester, a polyethoxylated alcohol, and an alkyl or alkenyl alcohol;
- g) a polyglycerol ester, a polyethoxylated alcohol, an alkyl or alkenyl alcohol, and a short chain ester of long chain alcohol or acid;
- h) a polyglycerol ester, a polyethoxylated alcohol, and a quaternary amine;
- i) a polyglycerol ester, a short chain ester of long chain alcohol or acid, and a quaternary amine;
- j) a polyglycerol ester, an amine oxide, and a quaternary amine;
- k) an alkyl or alkenyl alcohol, a short chain ester of a long chain alcohol or acid, and a quaternary amine;
- l) an alkyl or alkenyl alcohol, a short chain ester of long chain alcohol or acid, and an amine oxide;

m) a short chain ester of a long chain alcohol or acid, a polyethoxylated alkyl alcohol, and a quaternary amine;

n) a short chain ester of a long chain alcohol or acid, and a quaternary amine;

5 o) an alkyl betaine and a polyethoxylated alcohol;

p) an alkyl phospholipid and a polyethoxylated alcohol;

q) a short chain ester of long chain alcohol or acid, an alkyl alcohol, and a dialkoxymethicone;

10 r) a short chain ester of long chain alcohol or acid and a polyethoxylated alcohol;

s) a short chain ester of long chain alcohol or acid and a quaternary amine;

t) a polyglycerol ester and a polyethoxylated alcohol; or

u) an alkyl carboxylate and a polyethoxylated alcohol.

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37. The method of claim 33 wherein the composition further comprises dialkoxymethicone and polyether/polysiloxane copolymer.

38. The method of claim 33 wherein the composition further comprises at least  
20 one emollient.

39. The method of claim 38 wherein the composition further comprises both both wax and liquid emollients in a weight ratio of 3:1 to 1:3 wax to liquid emollients.

25 40. The method of claim 33 wherein the composition further comprises a salt.

41. The method of claim 33 wherein the composition further comprises a stabilizer.

42. The method of claim 33 wherein the composition further comprises a  
5 fragrance.

43. The method of claim 42 wherein the fragrance is a perfume.

44. The method of claim 33 wherein the composition is in the form of a lotion, a  
10 gel, or a foam.

45. The method of claim 33 wherein the composition is an aftershave.

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